Computer Network Lab

LAB WORK # 07

Submitted By
QASIM ALI (20P-0070)
Submitted to : Hurmat Hidayat
(INSTRUCTOR CS)

DEPARTMENT OF COMPUTER SCIENCE

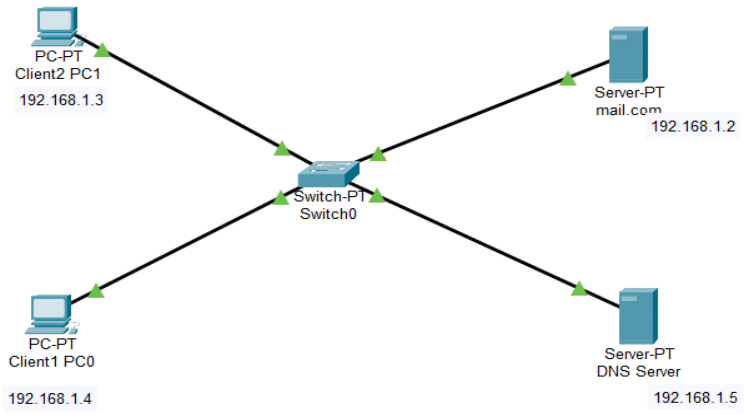
FAST NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES, PESHAWAR

Session 2020-2024

Task 1: Build the network topology

2. Configure IP addresses on the PCs, DNS Server and the Mail Server

- Mail Server IP address: 192.168.1.2
- PC0 IP address: 192.168.1.4
- PC1 IP address: 192.168.1.3
- DNS server IP address: 192.168.1.5



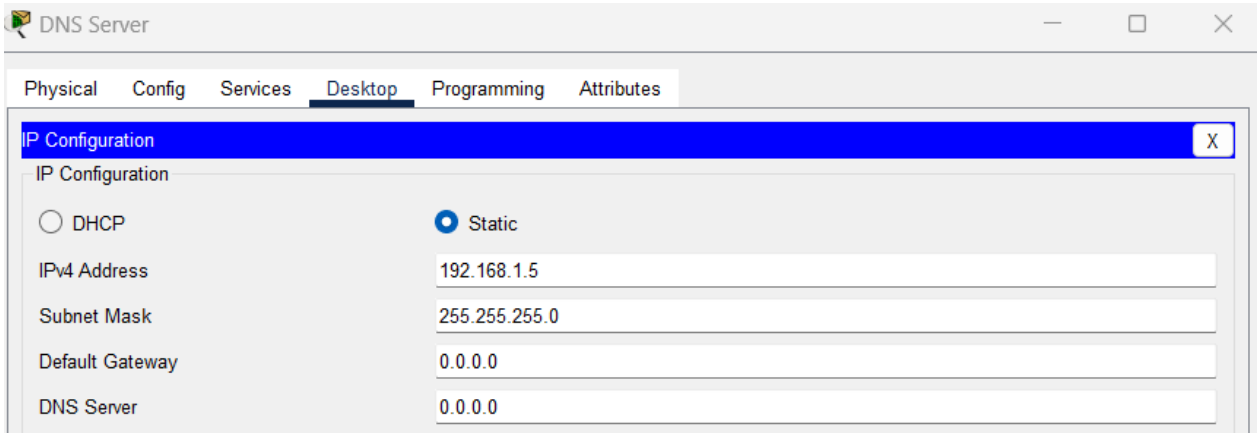
DNS Server :

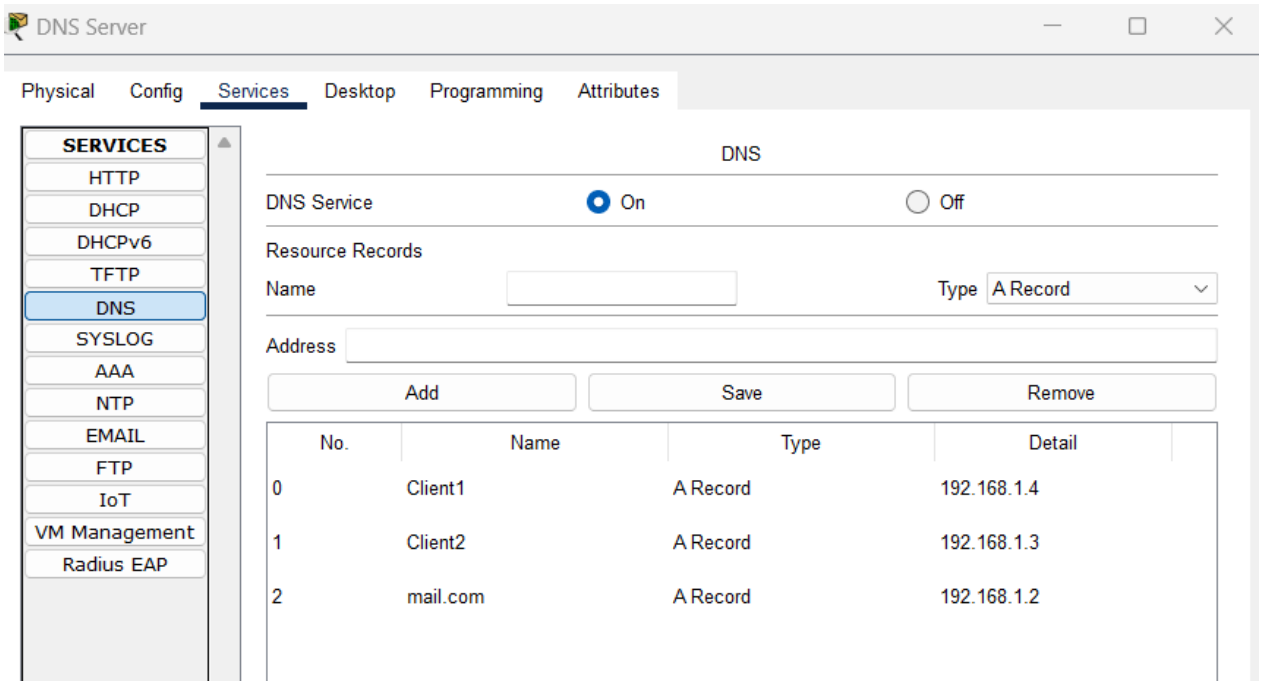
->configure the email server:

Provide the Domain name of the server then click on Set to set it. In this example I've used the name 'mail.com' .

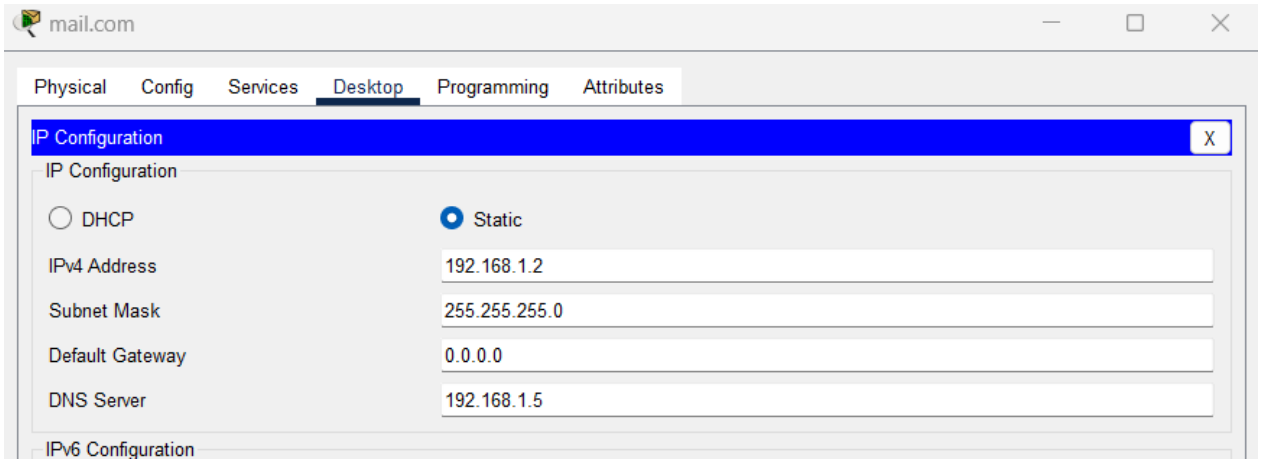
Proceed and add users and provide their passwords. I have two email clients(users) with usernames 'Client1' and 'Client2' with a password 'Client1' and 'Client2'

After entering a username and password, click on Add(+) to add the user to the server. You can optionally remove a user by clicking on Remove (-). You can change a user's password by clicking on change password.



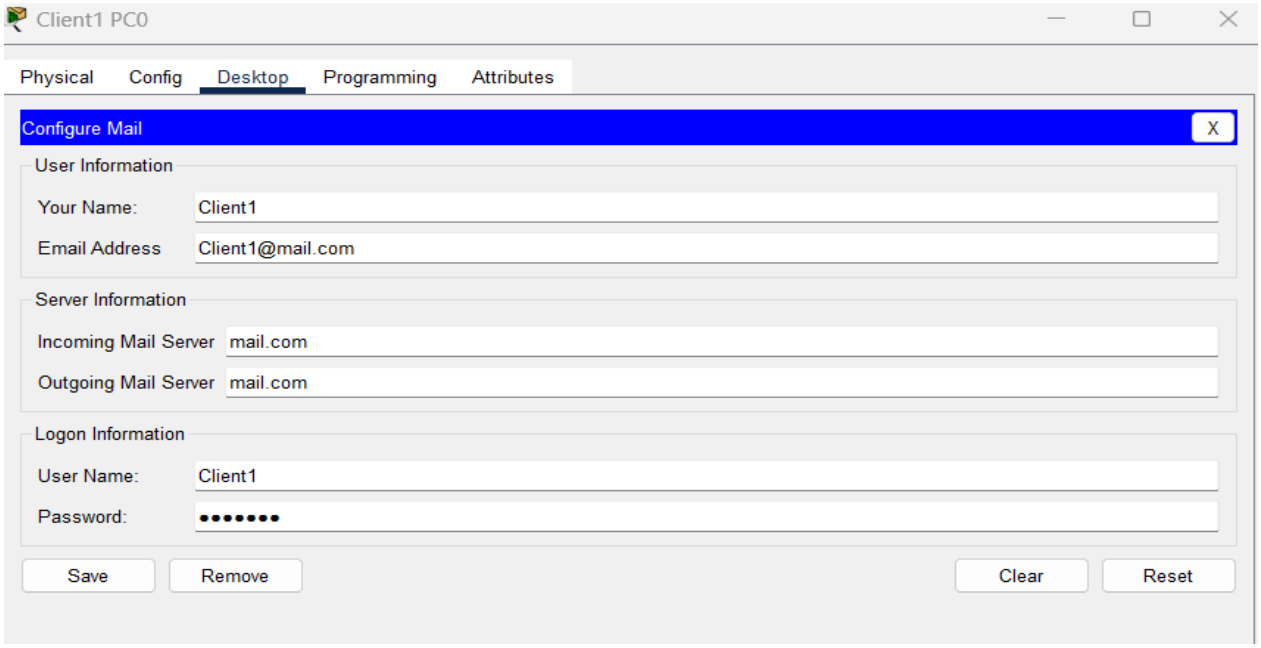

DNS Server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DNS
DNS Service
On
Off
Resource Records
Name
Type
A Record
Address
Add
Save
Remove
No.
Name
Type
Detail
0
Client1
A Record
192.168.1.4
1
Client2
A Record
192.168.1.3
2
mail.com
A Record
192.168.1.2

Mail server:

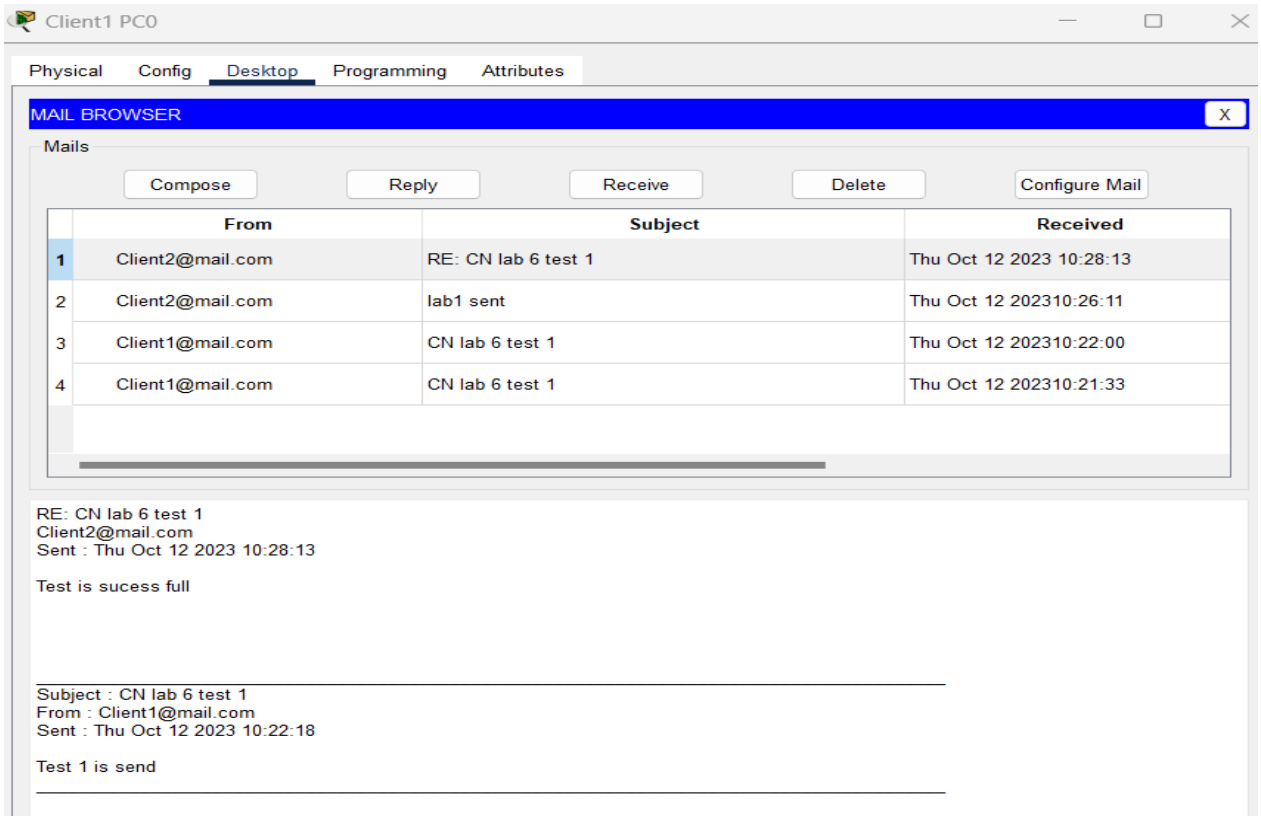

mail.com
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
0.0.0.0
DNS Server
192.168.1.5
IPv6 Configuration

PC 0 : Configure mail clients on the PCs and mail service on the generic server.
Mail Clients:

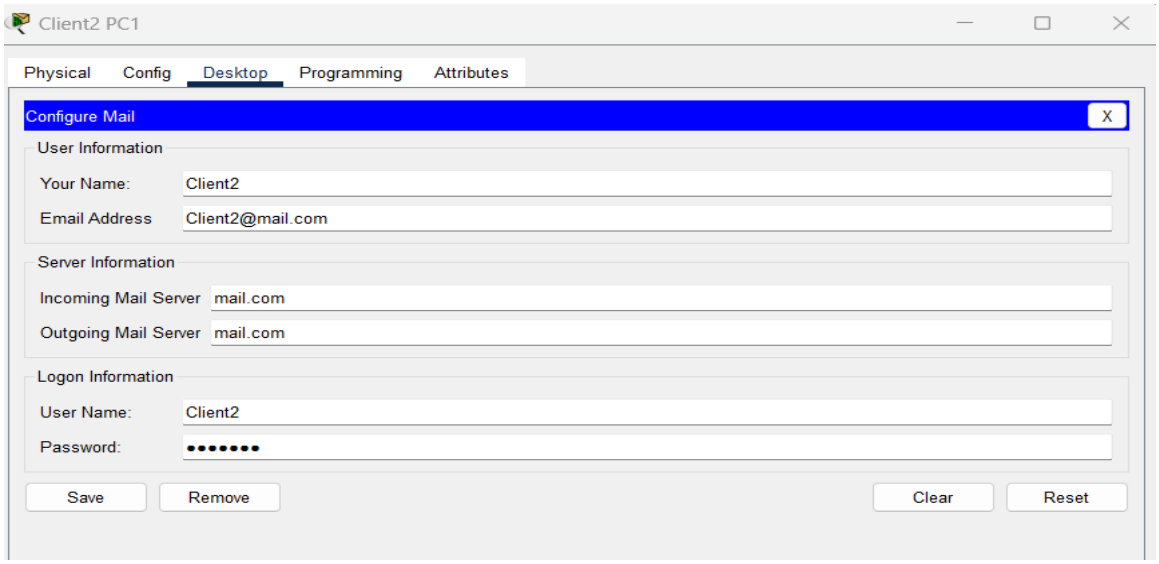
Click on PC0. Go to its Desktop tab, and click on Email. Configure the email client by filling in the user, server and login information.



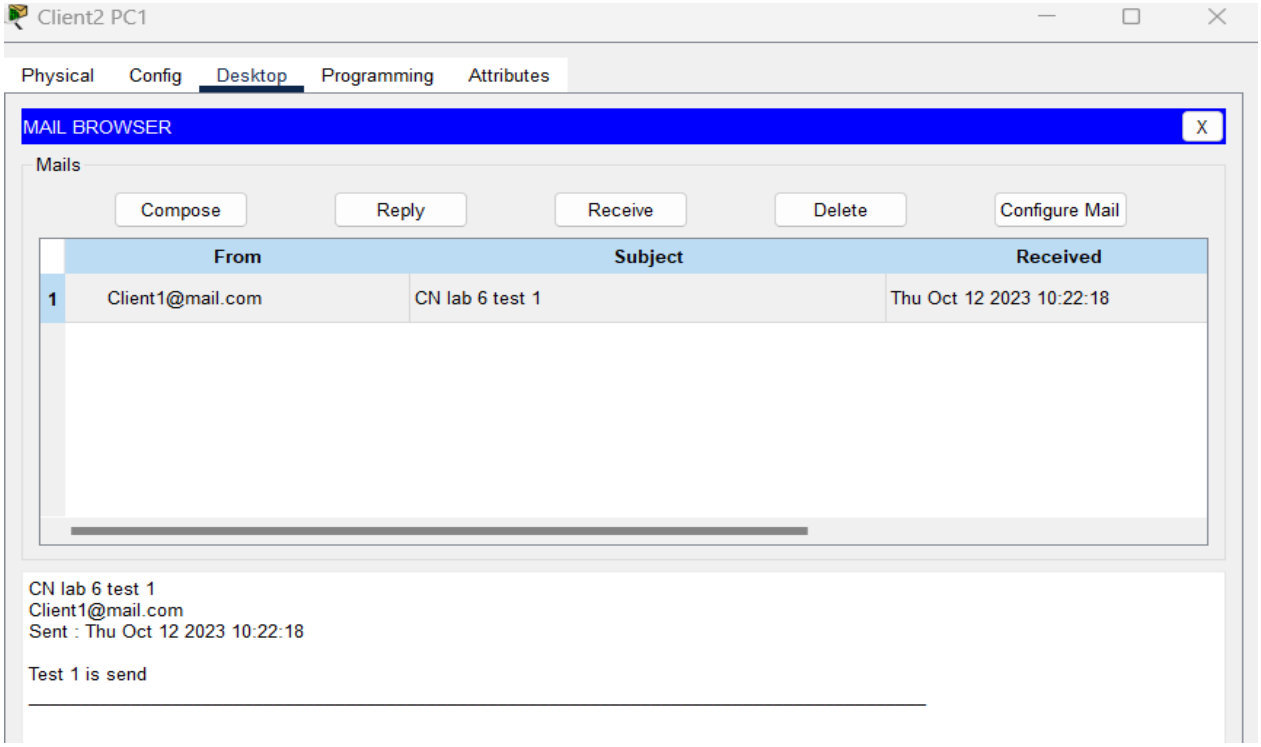
Mail sent and reply :



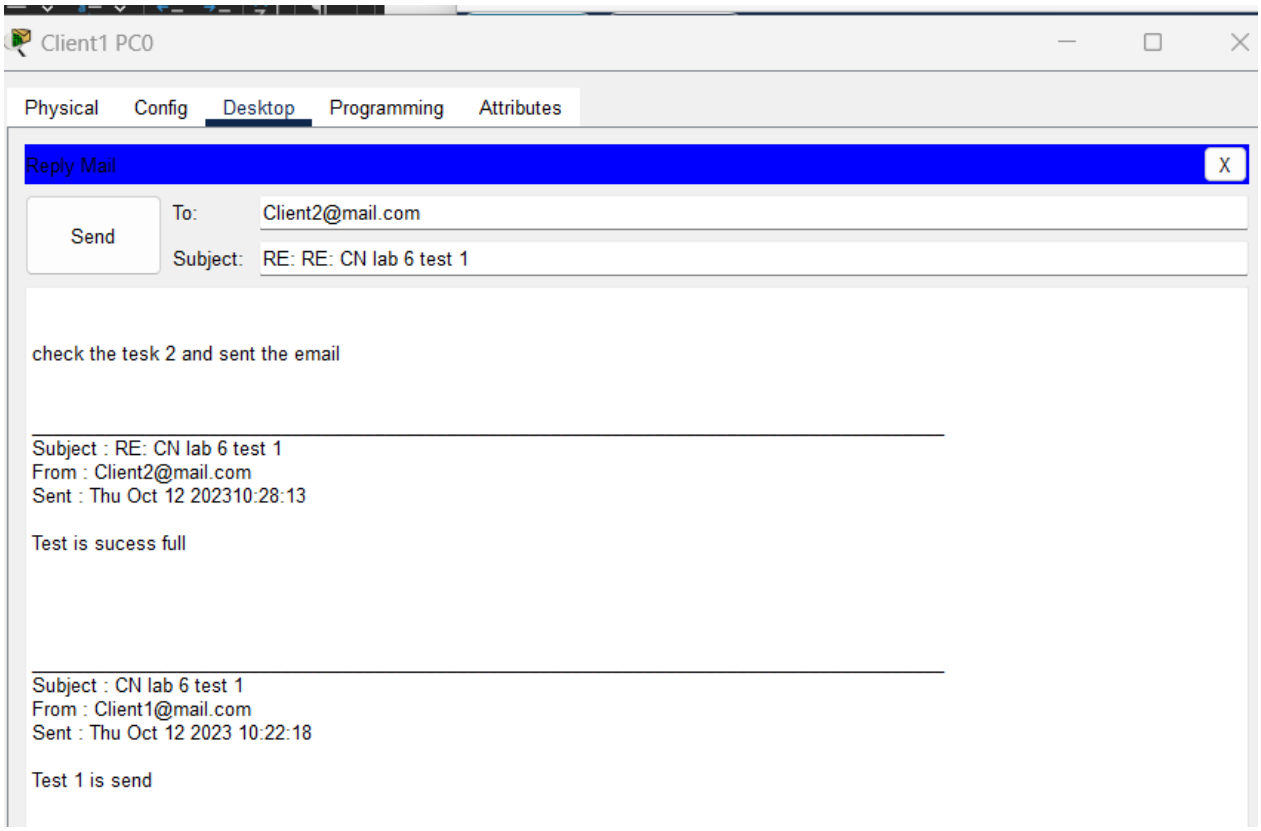
PC 1:



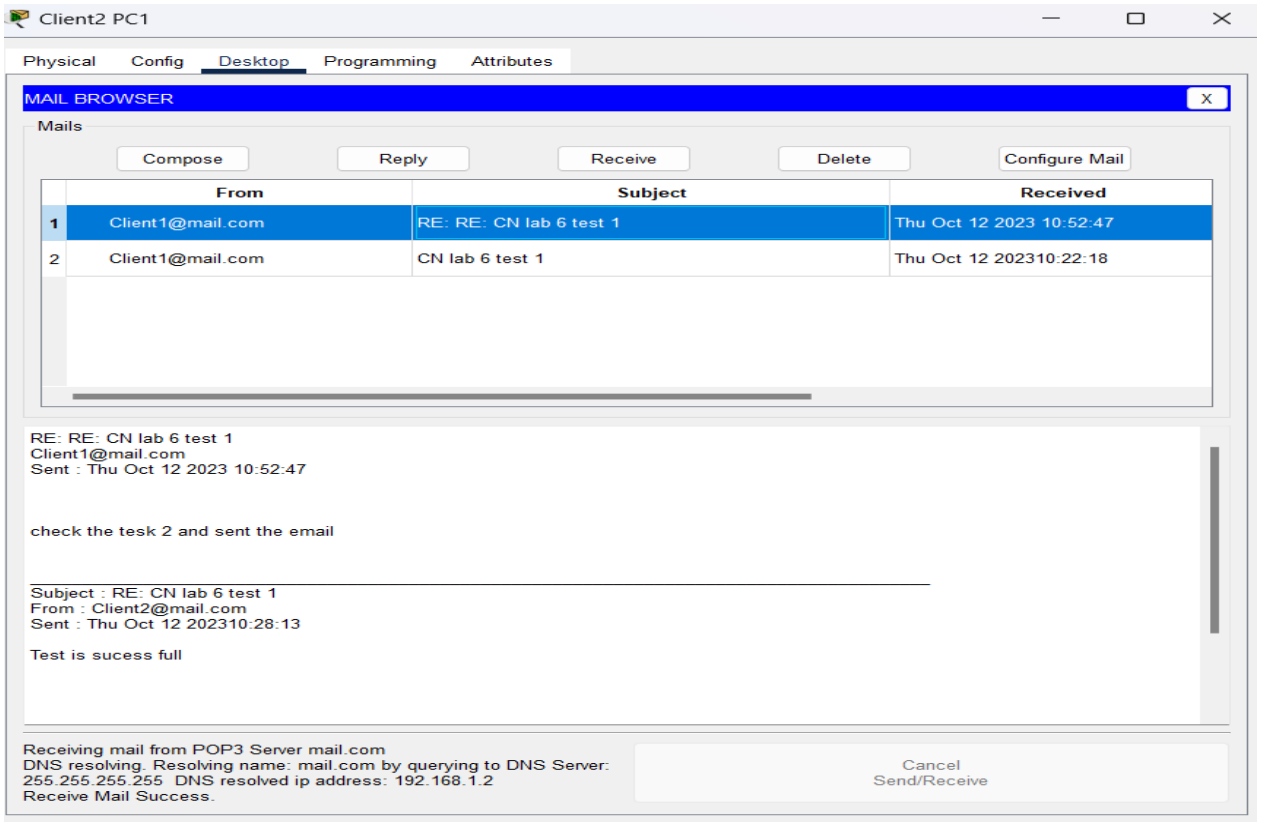
Try to see whether the email from PC0 is received on PC1. On the email client of PC1, click on Receive.
If everything is well set up, the email from PC0 will be received on PC1.



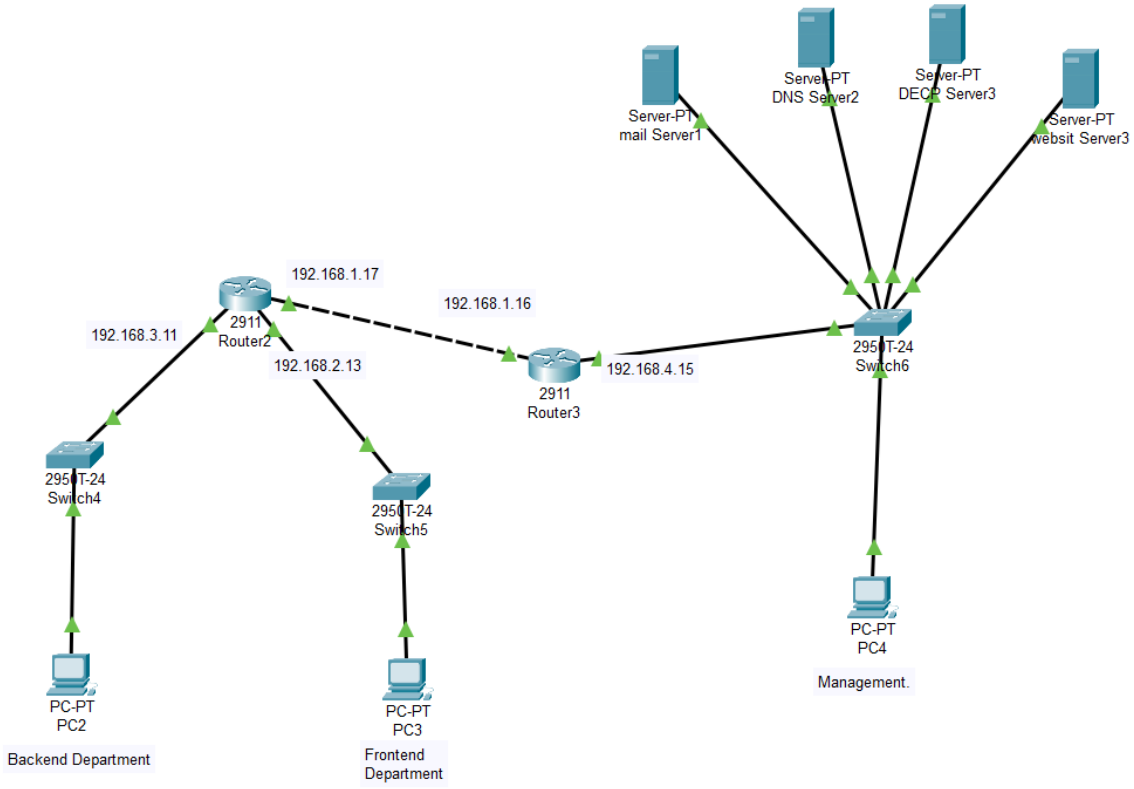
Reply test :



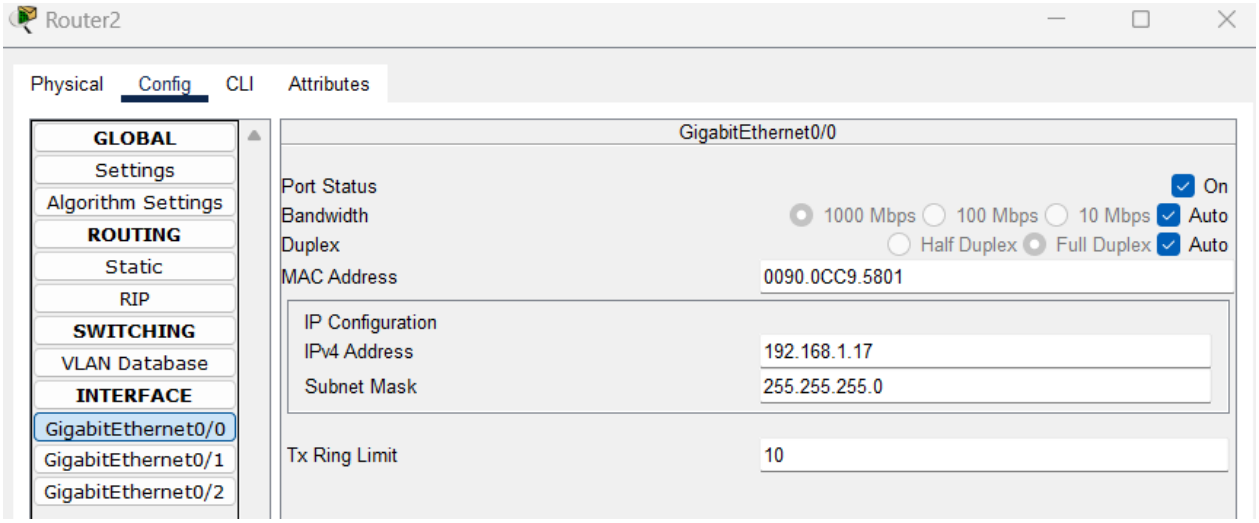
The test 2 is success full work :

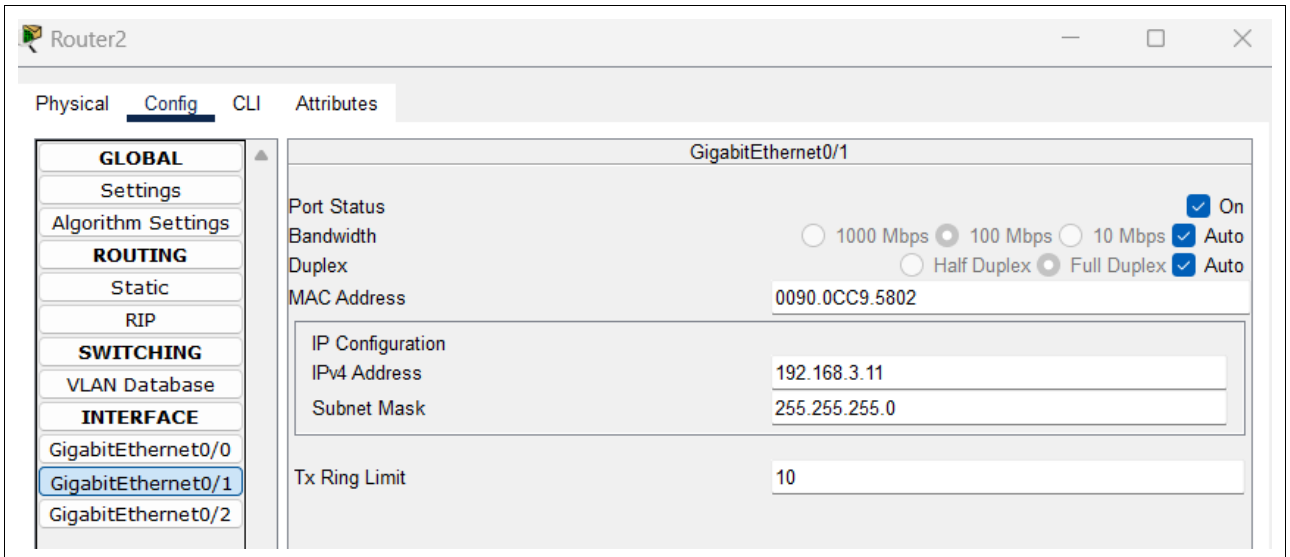


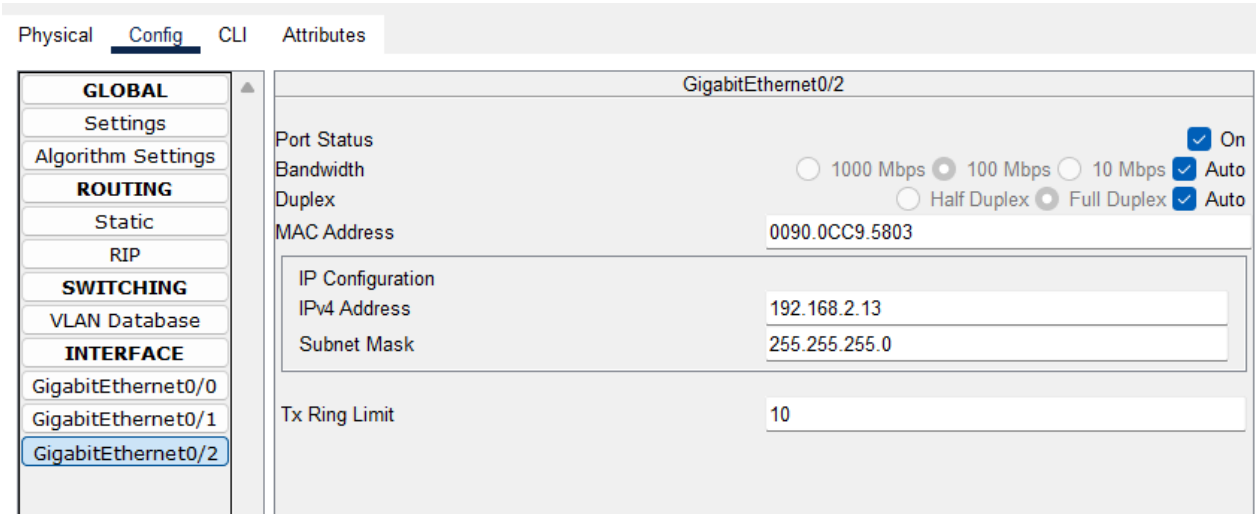
TASk 2 :
Build the network topology

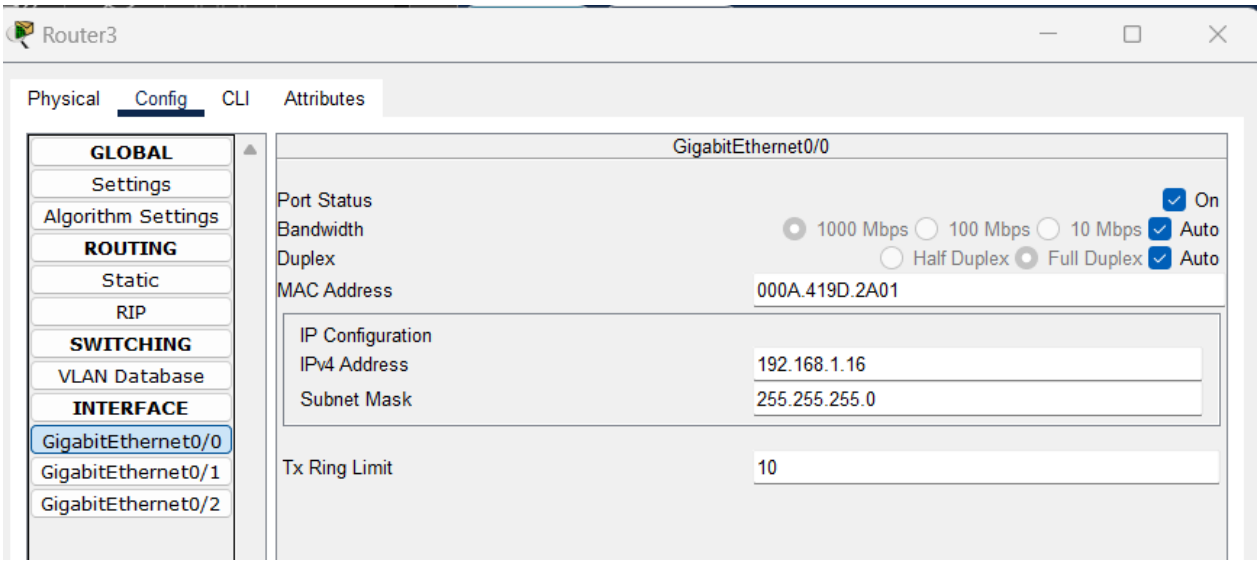


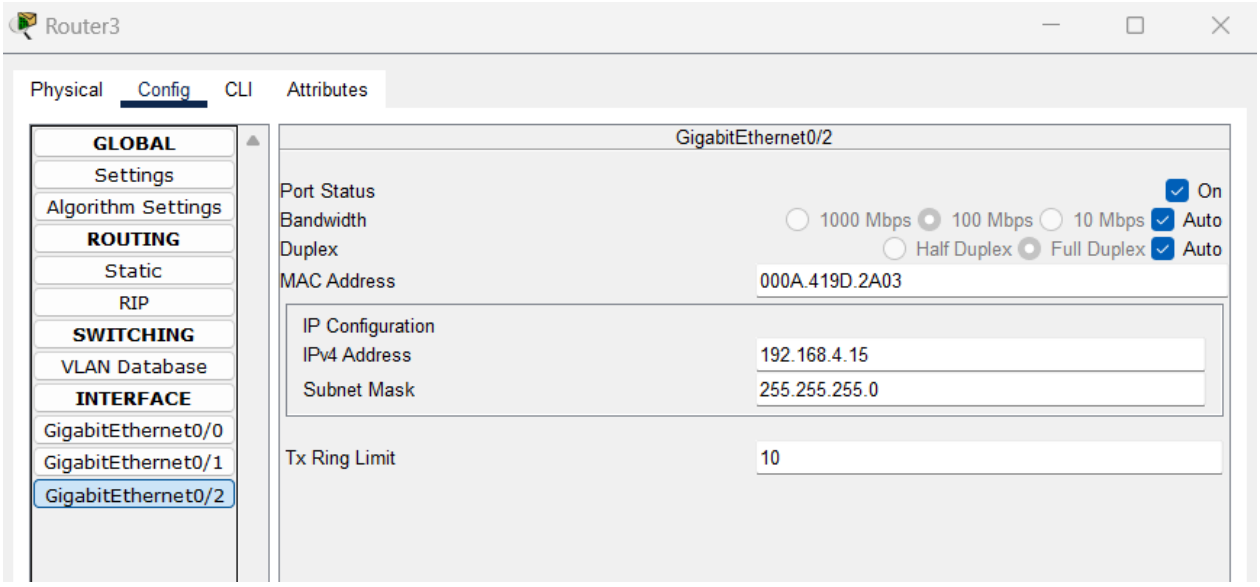
Router ip :



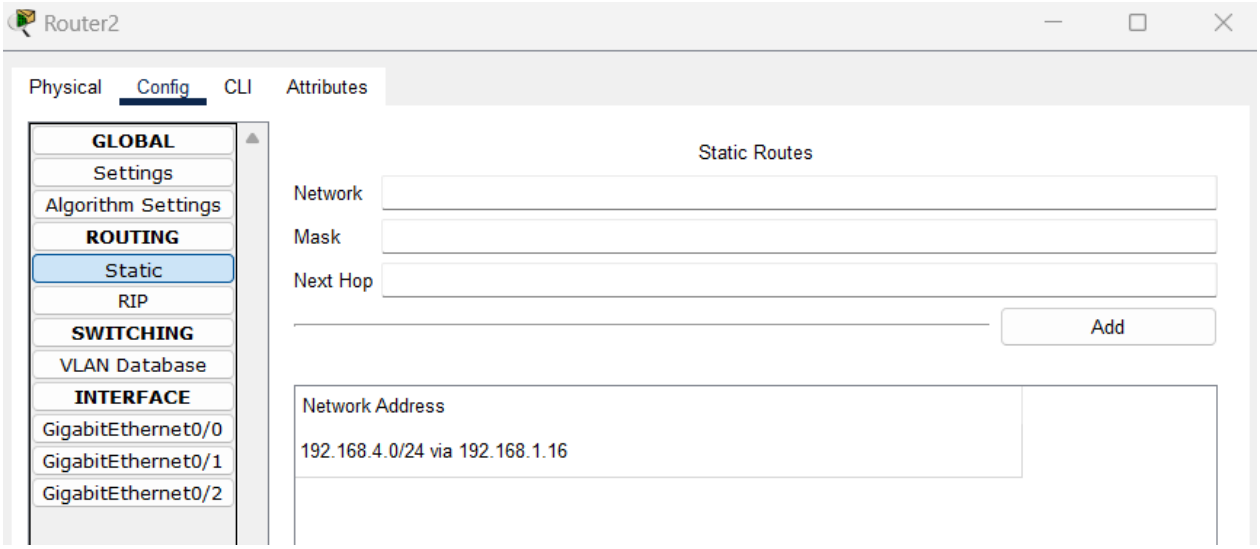

Router2
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
GigabitEthernet0/1
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0090.0CC9.5802
IP Configuration
IPv4 Address
192.168.3.11
Subnet Mask
255.255.255.0
Tx Ring Limit
10

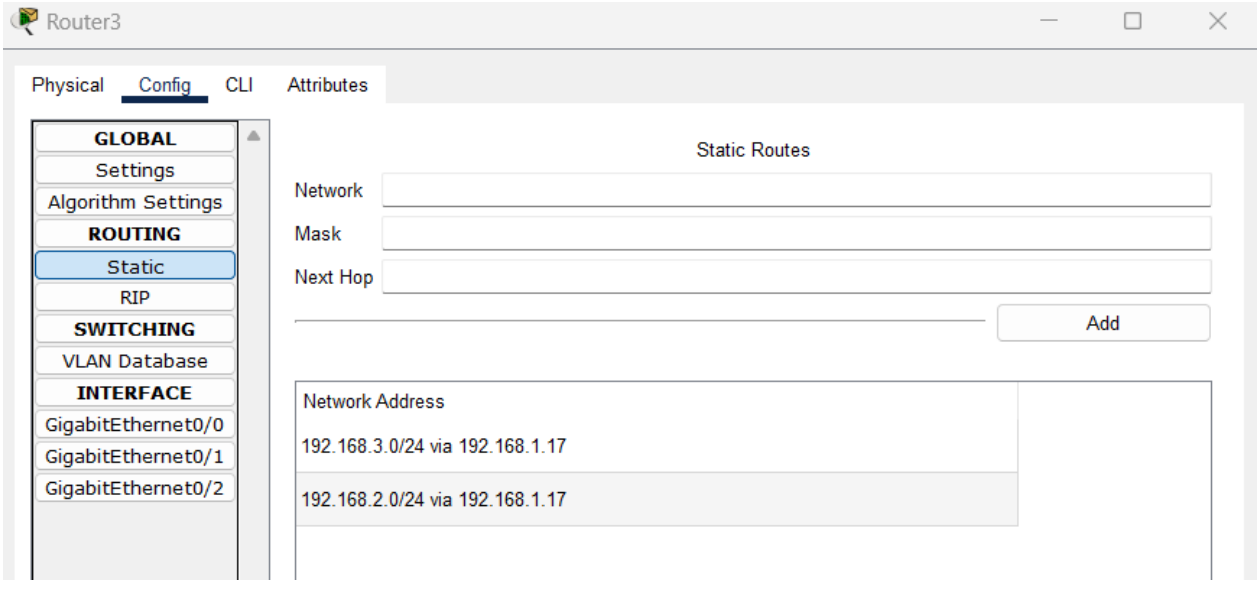

Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
GigabitEthernet0/2
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0090.0CC9.5803
IP Configuration
IPv4 Address
192.168.2.13
Subnet Mask
255.255.255.0
Tx Ring Limit
10


Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
GigabitEthernet0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
000A.419D.2A01
IP Configuration
IPv4 Address
192.168.1.16
Subnet Mask
255.255.255.0
Tx Ring Limit
10

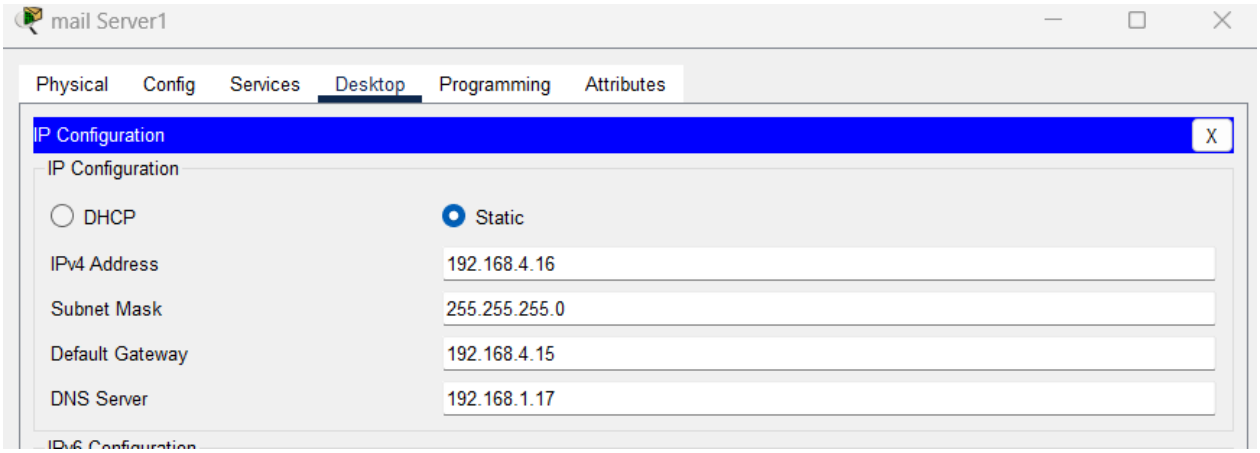

Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
GigabitEthernet0/2
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
000A.419D.2A03
IP Configuration
IPv4 Address
192.168.4.15
Subnet Mask
255.255.255.0
Tx Ring Limit
10

Static:

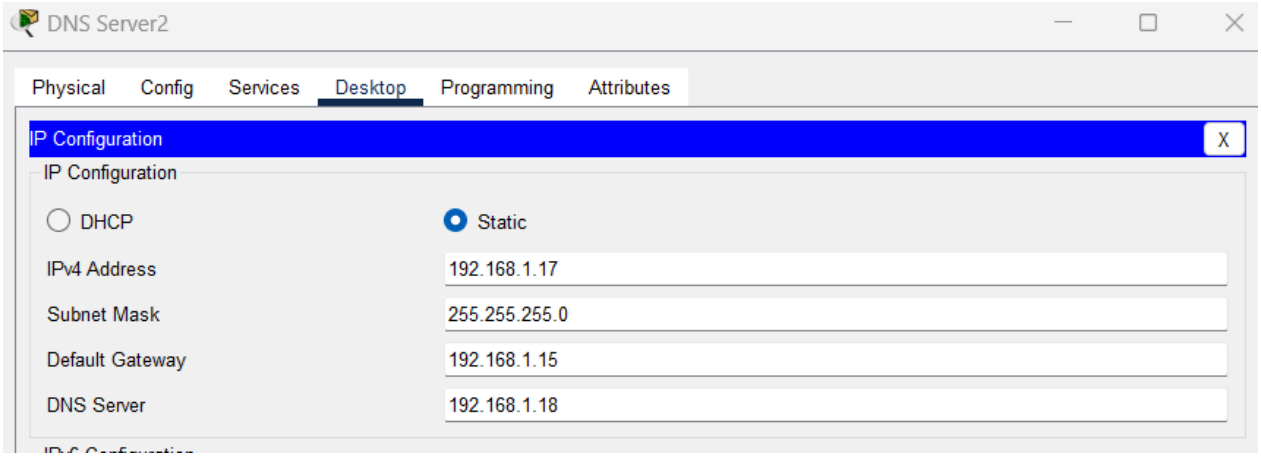

Router2
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.4.0/24 via 192.168.1.16


Router3
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Static Routes
Network
Mask
Next Hop
Add
Network Address
192.168.3.0/24 via 192.168.1.17
192.168.2.0/24 via 192.168.1.17

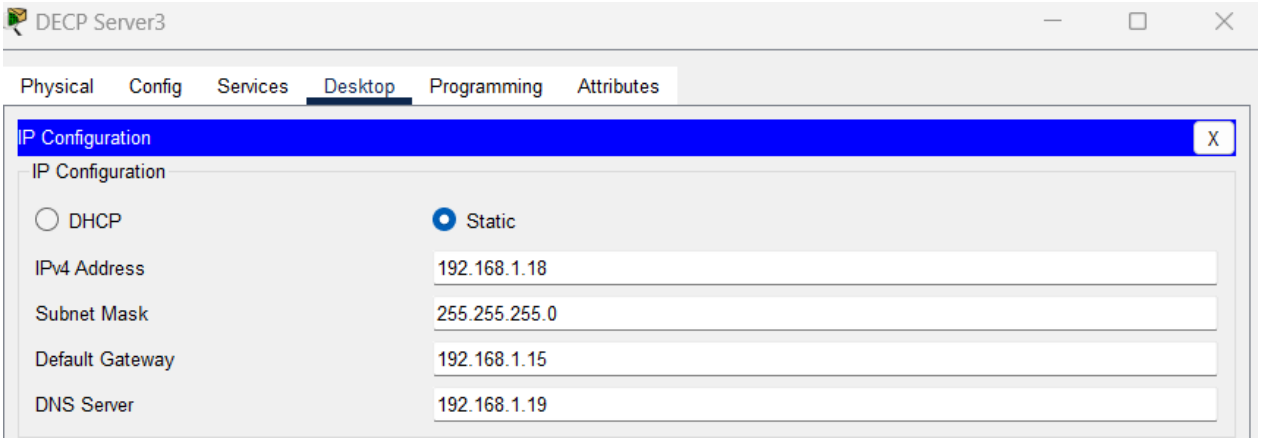
Mail server:



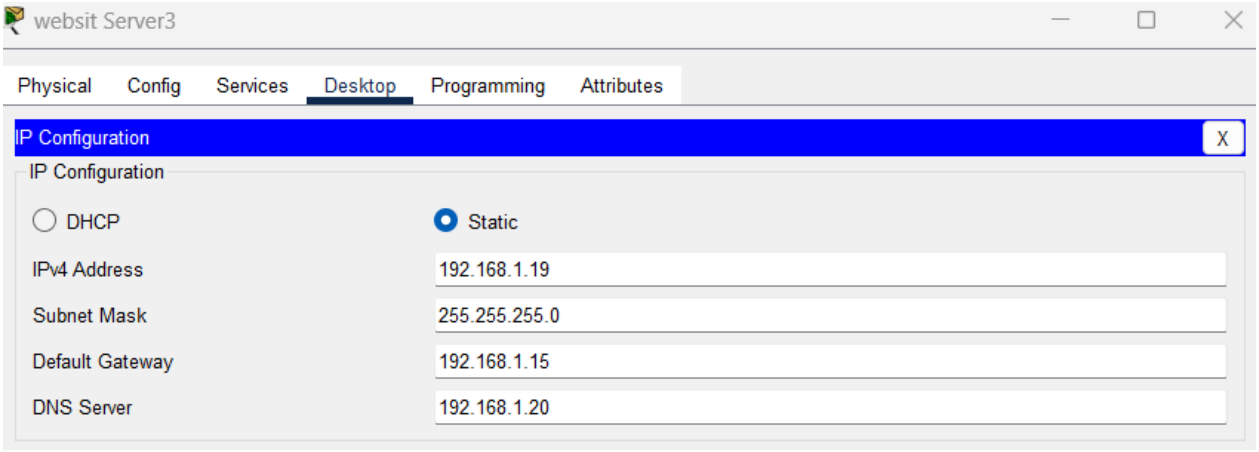
DNS Server :



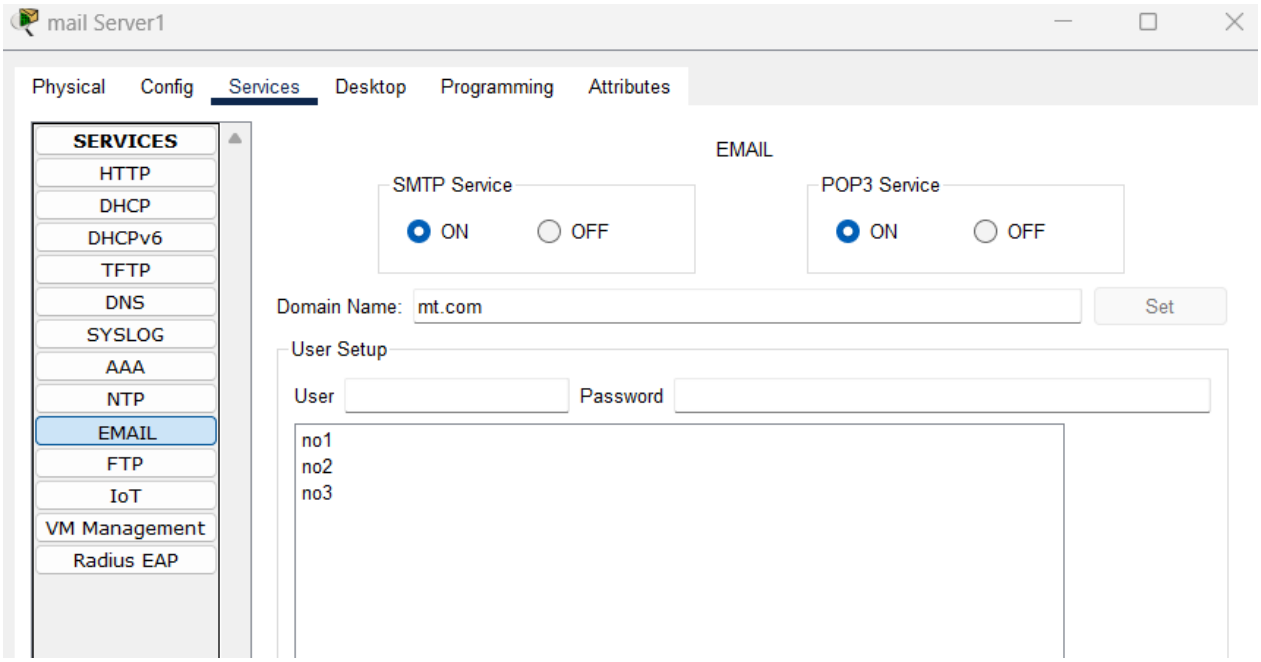
DECP Server:



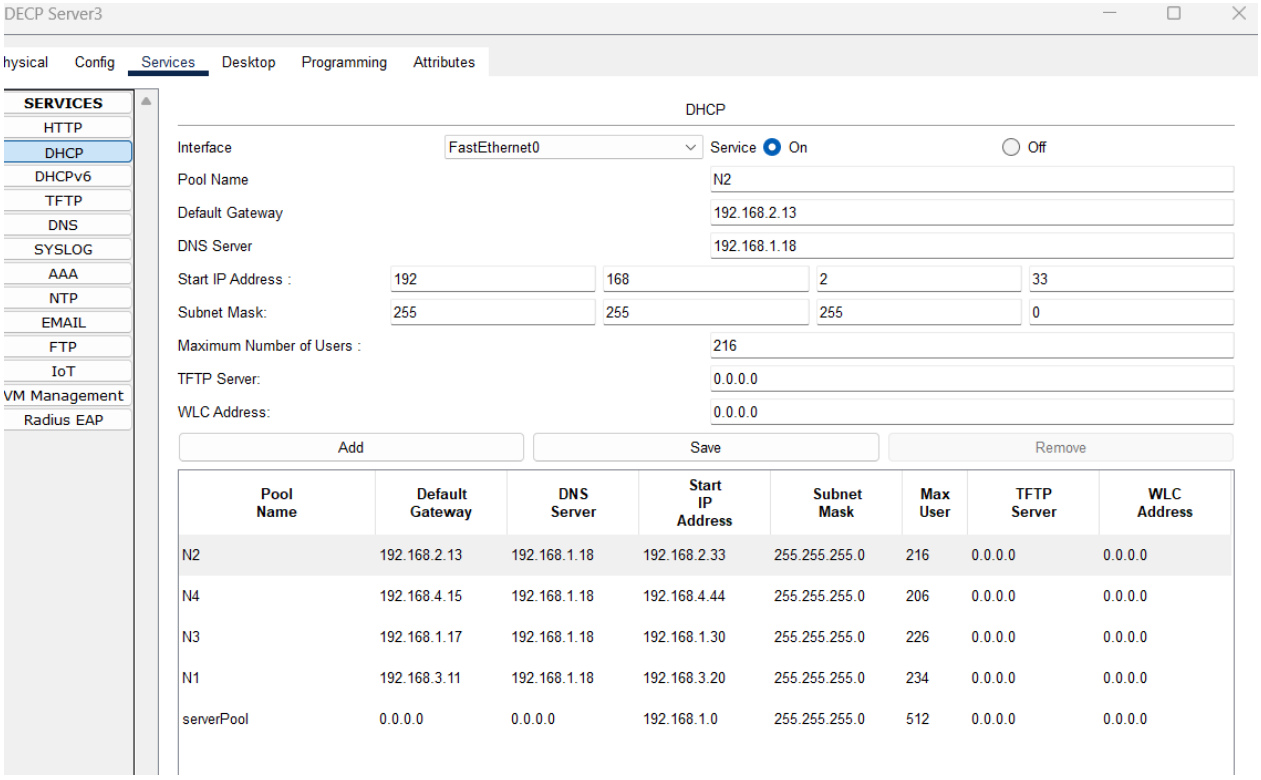
Website Server:

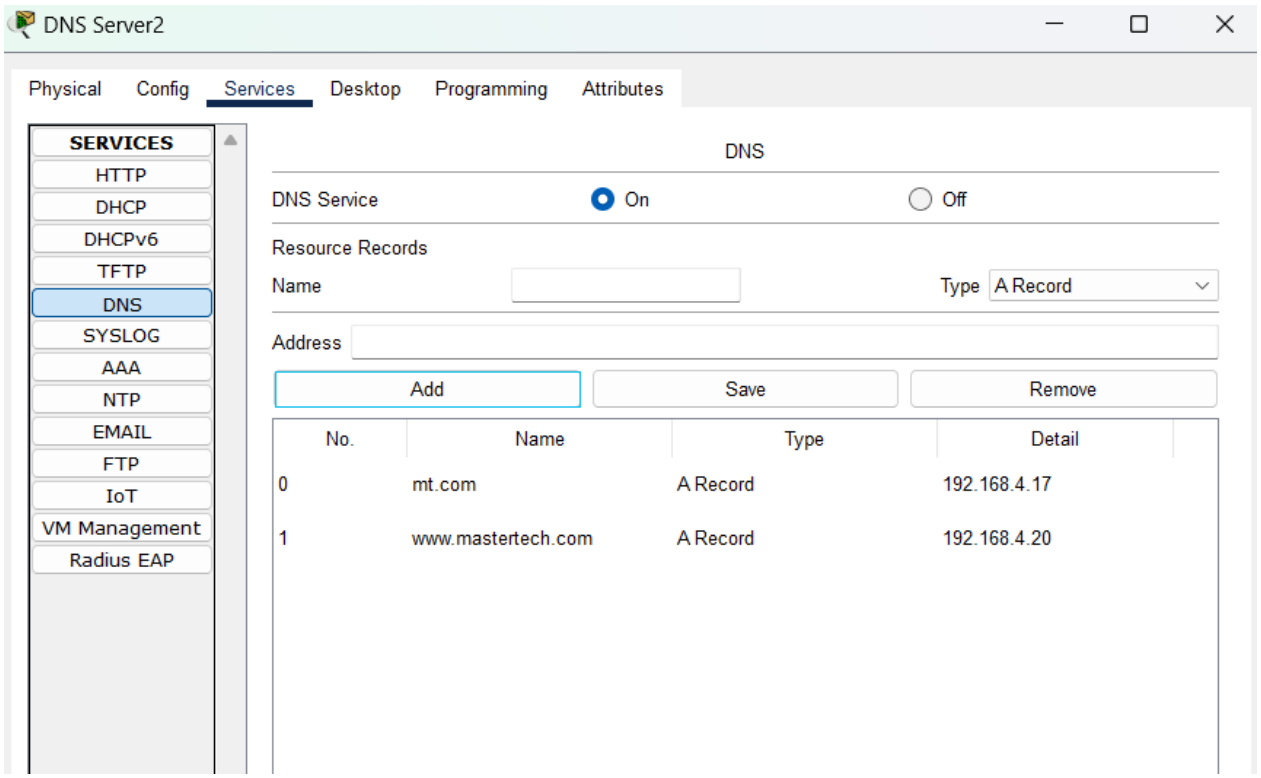


Email services on :

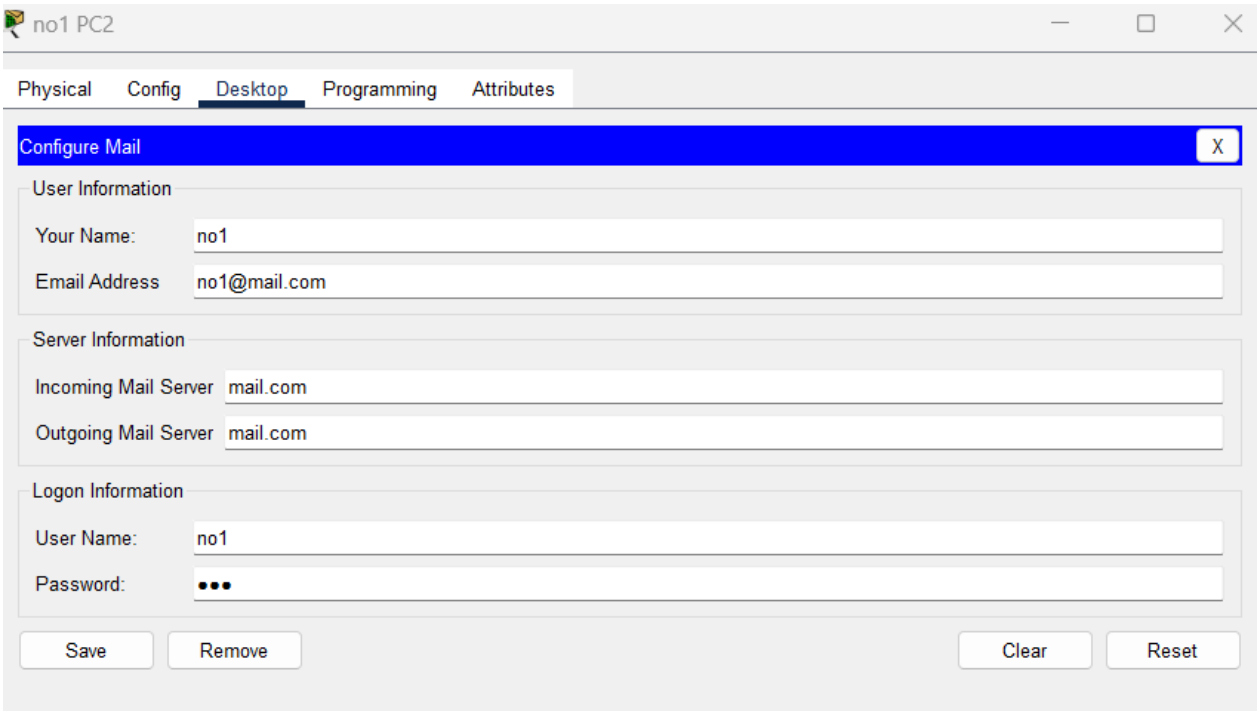


DECP Server :


DECP Server3
hysical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DHCP
Interface
FastEthernet0
Service
On
Off
Pool Name
N2
Default Gateway
192.168.2.13
DNS Server
192.168.1.18
Start IP Address :
192
168
2
33
Subnet Mask:
255
255
255
0
Maximum Number of Users :
216
TFTP Server:
0.0.0.0
WLC Address:
0.0.0.0
Add
Save
Remove
Pool Name
Default Gateway
DNS Server
Start IP Address
Subnet Mask
Max User
TFTP Server
WLC Address
N2
192.168.2.13
192.168.1.18
192.168.2.33
255.255.255.0
216
0.0.0.0
0.0.0.0
N4
192.168.4.15
192.168.1.18
192.168.4.44
255.255.255.0
206
0.0.0.0
0.0.0.0
N3
192.168.1.17
192.168.1.18
192.168.1.30
255.255.255.0
226
0.0.0.0
0.0.0.0
N1
192.168.3.11
192.168.1.18
192.168.3.20
255.255.255.0
234
0.0.0.0
0.0.0.0
serverPool
0.0.0.0
0.0.0.0
192.168.1.0
255.255.255.0
512
0.0.0.0
0.0.0.0


DNS Server2
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DNS
DNS Service
On
Off
Resource Records
Name
Type
A Record
Address
Add
Save
Remove
No.
Name
Type
Detail
0
mt.com
A Record
192.168.4.17
1
www.mastertech.com
A Record
192.168.4.20

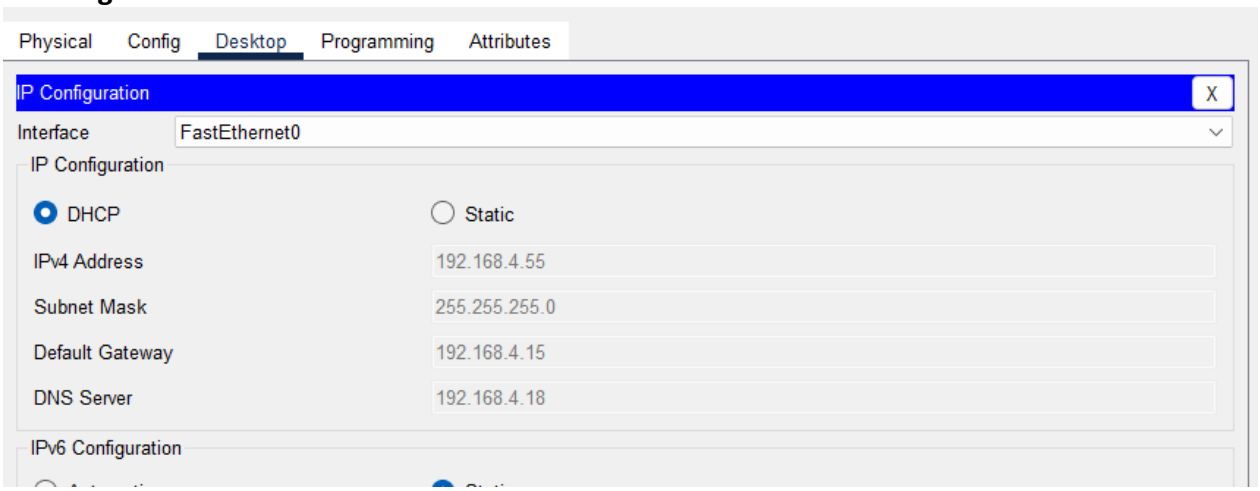
PC confg:



Router CLI :

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Gig0/1
Router(config-if)#ip helper-address 192.168.4.19
Router(config-if)#exit
Router(config)#interface Gig0/2
Router(config-if)#ip helper-address 192.168.4.19
Router(config-if)#exit
Router(config)#
```

Pc confg:



We are add more screen short but time is out running .